super-identities of each patient tag by said data unification and transformation engine using said rules engine.

9. The system of claim **2**, wherein each PACS further includes a modality that acquires or generates non-DICOM images, further comprising an extensible process engine that assigns a DICOM tag to each of said non-DICOM image, and said assigned DICOM tags are stored in said DICOM tag database.

10. The system of claim **1** further comprising an interface that handles the acquisition, retrieval, transmission, storage, and display of DICOM images from each of said at least two PACS.

11. The system of claim **1** further comprising an extensible process engine that analyzes and optimizes said process steps performed by said control engine.

12. A system for coordinating a process for a Picture Archiving and Communication System (PACS) that handles the acquisition, retrieval, transmission, storage, and display of patients medical images using the Digital Imaging and Communications in Medicine (DICOM) standard, wherein said PACS includes at least one modality that acquires DICOM images, at least one workstation that retrieves and displays DICOM images, and at least one server that transmits, manages, and stores DICOM images and controls the at least one modality and the at least one workstation, wherein each image has an associated DICOM tag and an associated patient tag unique to each PACS, wherein the process includes at least one process step defined by at least one modality, workstation, server, DICOM tag, or patient tag, comprising:

a. a rules engine defining a set of transformation rules for each image, modality, workstation, server, DICOM tag, patient tags, and process step from said PACS;

b. a data unification and transformation engine identifying and resolving any conflict on the identities or values of the modalities, workstations, servers, DICOM tags, patient tags, and process step from said PACS using said rules engine by tracking and assigning a unique super-identity or super-value to each modality, workstation, server, DICOM tag, patient tag, and process step for said PACS;

c. at least one database storing a list of the DICOM tags of each image from said PACS, and storing the tracking and assignment of the super-identities or super-values by said data unification and transformation engine;

d. a security framework that controls access to each image from said PACS based on the assignment of the super-identities or super-values by said data unification and transformation engine and stored in said at least one database; and

e. a control engine performing the process steps to acquire, retrieve, transmit, stores and/or displays the images from said PACS based on the DICOM tag and the assignment of the super-identities or super-values stored in said at least one database.

13. A method for coordinating a process across at least two independent Picture Archiving and Communication System (PACS) to allow interoperability of the PACS, each PACS handles the acquisition, retrieval, transmission, storage, and display of patients medical images using the Digital Imaging and Communications in Medicine (DICOM) standard, wherein each PACS includes at least one modality that acquires DICOM images, at least one workstation that retrieves and displays DICOM images, and at least one server that transmits, manages, and stores DICOM images and controls the at least one modality and the at least one workstation, wherein each image has an associated DICOM tag and an associated patient tag unique to each PACS, wherein the process from one PACS to another PACS includes at least one process step defined by at least one modality, workstation, server, DICOM tag, or patient tag, comprising the steps of:

a. providing a rules engine that defines a set of transformation rules for each image, modality, workstation, server, DICOM tag, patient tags, and process step from each PACS;

b. providing a data unification and transformation engine that identifies and resolves any conflict on the identities or values of the modalities, workstations, servers, DICOM tags, patient tags, and process step from all PACS using said rules engine and tracking and assigning a unique super-identity or super-value to each modality, workstation, server, DICOM tag, patient tag, and process step for all PACS;

c. providing at least one database;

d. storing a list of the DICOM tag of each image from each PACS in said at least one database;

e. storing the tracking and assignment of the super-identities or super-values by said data unification and transformation engine in said at least one database;

f. providing a security framework that controls access to each image from each PACS based on the assignment of the super-identities or super-values by said data unification and transformation engine stored in said at least one database; and

g. providing a control engine that performs the process steps to acquire, retrieve, transmit, store and/or display the images from any of said at least two PACS based on the DICOM tag and the assignment of the super-identities or super-values stored in said at least one database.

14. The method of claim **13** further comprising the step of providing an interface that handles the acquisition, retrieval, transmission, storage, and display of DICOM images from each of said at least two PACS.

15. The method of claim **13** wherein said data unification and transformation engine does not alter the DICOM images stored in said at least one PACS.

16. The method of claim **13** wherein said data unification and transformation engine does not alter the DICOM tags stored in said at least one PACS.

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